



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

B

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,430	09/30/2003	Ali-Reza Adl-Tabatabai	42P17035	7017
8791	7590	03/30/2007	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			LEE, CHUN KUAN	
			ART UNIT	PAPER NUMBER
			2181	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/676,430	ADL-TABATABAI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Chun-Kuan (Mike) Lee	2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 September 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :3/14/05, 8/29/05, 11/21/05, 12/23/05, 3/27/06, 7/28/06, 9/01/06, 12/19/06 and 1/30/07.

## DETAILED ACTION

### I. INFORMATION CONCERNING OATH/DECLARATION

#### Oath/Declaration

1. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

### II. INFORMATION CONCERNING DRAWINGS

#### Drawings

2. The applicant's drawings submitted are acceptable for examination purposes.

### III. ACKNOWLEDGEMENT OF REFERENCES CITED BY APPLICANT

3. As required by M.P.E.P. 609(C), the applicant's submissions of the Information Disclosure Statement dated March 14, 2005, August 29, 2005, November 21, 2005, December 23, 2005, March 27, 2006, July 28, 2006, September 01, 2006, December 19, 2006 and January 30, 2007 are acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending. As required by M.P.E.P 609 C(2), a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

#### **IV. OBJECTIONS TO THE CLAIMS**

##### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9-10 and 13-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As per claim 9, it appears unclear to the examiner as to where in the specification or the drawings that enables the first component and the second component to be compressed into fix length tags. It appears to the examiner, in view of the drawings (Fig. 4) and the Specification (p. 9, [0033]), that the first component and the second component to be compressed into fix length compressed symbol rather than fix length tags. The examiner will assume that the first component and the second component to be compressed into fix length symbol for the current examination.

As per claim 10, it appears unclear to the examiner as to where in the specification or the drawings that enables the first component and the second component to be compressed into variable length tags.

As per claims 13-14, it appears unclear to the examiner as to where in the specification or the drawings that enables the implementation of "constant match logic to determine if the second component has all ones or all zeroes."

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the limitation "the no match logic" in claim 14, line 2. There is insufficient antecedent basis for this limitation in the claim.

As per claim 4, it appears unclear which "each symbol" the claimed limitation is referring to, whether it is referring to "a string of data symbols" or "a plurality of compressed symbols." The examiner will assume that "each symbol" is referring to the "each compressed symbols."

As per claim 14, it appears unclear which no match logic the applicant is referring to.

## **V. REJECTIONS BASED ON PRIOR ART**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2181

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 7, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tremaine (US Patent 6,775,751) in view of Goldberg (US Patent 7,035,656).

7. As per claims 1, 7, 23 and 26, Tremaine teaches a compression system and method comprising:

a central processing unit (CPU) (Fig. 1, ref. 101);  
a cache memory coupled to the CPU having a plurality of compressible cache lines to store additional data (col. 1, ll. 22-43);  
receiving a string of data symbols (col. 1, ll. 22-43 and col. 5, ll. 1-11);  
a register (Fig. 1, ref. 113) to store a plurality of fixed length data symbols to be compressed (col. 5, ll. 1-11);  
a chipset having a cache controller (Fig. 1, ref. 102), coupled to the CPU (Fig. 1, ref. 101) and the cache memory (col. 1, ll. 22-43), including:  
compression logic (Fig. 1, ref. 104) to compress each of the plurality of cache lines (data symbols) by compressing the data to be stored into of the sector (Fig. 1, ref. 204) having a fix size compressed data block (e.g. 256 byte) (col. 6, ll. 31-35); and  
a main memory (Fig. 1, ref. 103) coupled to the chipset, wherein the main memory have a sector translation table (Fig. 2, ref. 202 and Fig. 3, ref. 302) having a plurality of entries (Fig. 3, ref. 301) comprising a plurality of fields (e.g. degree of

Art Unit: 2181

compression (DOC), touch (T) bit, pointers (PTR0-PTRn)) having fix length and fix offset (col. 6, ll. 34-35 and col. 8, ll. 21-31).

Tremaine does not teach the compression system and method comprising wherein the fixed sized compressed data block having a plurality of offset compressed symbols and dictionary elements, wherein the dictionary elements are stored in a plurality of dictionary registers, the symbols and dictionary elements having a fixed length and fixed offset.

Goldberg teaches a data compression system and method comprising transmission of compressed data having a dictionary element along with the compressed data to a receiver (col. 1, ll. 17-40).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Goldberg's dictionary element into Tremaine's compression system and method. The resulting combination of the references further teaches the compression system and method comprising wherein the fixed sized compressed data block having the plurality of compressed data (i.e. compressed symbols) along with the dictionary elements, wherein it would have been obvious to store the dictionary elements in a plurality of dictionary registers, and wherein the plurality of compressed data and the dictionary elements have the fixed length and fixed offset.

Therefore, it would have been obvious to combine Goldberg with Tremaine for the benefit of optimizing the amount of data transferred by reducing the actual amount

of data transferred and enabling more resources for error detection and data correction (Goldberg, col. 1, ll. 23-26).

8. Claims 2-6, 8-12, 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tremaine (US Patent 6,775,751) in view of Goldberg (US Patent 7,035,656) as applied to claims 1, 7, 23 and 26 above, and further in view of Castelli et al. (US Patent 6,847,315).

9. As per claims 2 and 8, Tremaine and Goldberg teach all the limitations of claims 1 and 7 as discussed above, where Tremaine further teaches the compression system and method comprising a first symbol would be compared with the dictionary element (Tremaine, col. 5, ll. 35-49).

Tremaine and Goldberg do not teach the compression system and method comprising dividing a first symbol into a first component and a second component; and comparing the first component with the dictionary elements.

Castelli teaches a data compression system and method comprising a data compressor separating a uncompressed data into a first portion and a second portion, wherein one of the portion is left uncompressed and the other portion is compressed (col. 1, ll. 60-65 and col. 2, ll. 10-18).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Castelli's separation of the uncompressed data into Tremaine and Goldberg's the compression system and method. The resulting

combination of the references further teaches the compression system and method comprising dividing the uncompressed data (e.g. first symbol) into the first portion (e.g. first component) and the second portion (e.g. second component); and comparing the first component with the dictionary elements.

Therefore, it would have been obvious to combine Castelli with Tremaine and Goldberg for the benefit of reducing latency associated with the transferring of compressed data as data is compressed at the transmitter, transmitted in compressed form and decompressed at the receiver (Castelli, col. 1, ll. 57-59).

10. As per claim 3, Tremaine, Goldberg and Castelli teach all the limitations of claim 2 as discussed above, where Tremaine and Castelli further teach the compression system and method further comprising compressing the first component to form a first tag if the first component matches a dictionary element (Tremaine, col. 5, ll.35-49 and Castelli, Fig. 7 and col. 2, ll. 10-18), such that if the uncompressed data (i.e. first component) matches the dictionary element, the uncompressed data would obvious be encoded into the compressed state (i.e. first tag).

11. As per claim 4, Tremaine, Goldberg and Castelli teach all the limitations of claim 3 as discussed above, where Tremaine further teaches the compression system and method further comprising wherein each compressed symbol includes a tag to indicate a compression type (e.g. degree of compressibility (DOC)) (Tremaine, col. 8, ll.29-58).

Art Unit: 2181

12. As per claim 5, Tremaine, Goldberg and Castelli teach all the limitations of claim 3 as discussed above, where Goldberg and Castelli further teach the compression system and method further comprising storing the first component at a dictionary element if the first component does not match a dictionary element (Goldberg, col. 1, II. 31-35 and Castelli, Fig. 7), as the dictionary must also be transmitted along with the compressed data for proper decompressing.

13. As per claim 6, Tremaine, Goldberg and Castelli teach all the limitations of claim 3 as discussed above, where Tremaine and Castelli further teach the compression system and method comprising wherein compressing the data comprises dividing a second symbol into a second component and a second component; and comparing the second component with the dictionary elements (Tremaine, col. 1, II. 22-43 and col. 5, II. 1-11 and Castelli, col. 1, II. 60-65 and col. 2, II. 10-18), as after compressing the first symbol, the subsequent second symbol is compressed in the similar method.

14. As per claim 9, Tremaine, Goldberg and Castelli teach all the limitations of claim 8 as discussed above, where Tremaine further teach the compression system and method comprising wherein the first and second components are compressed into fixed length symbol (Tremaine, col. 6, II. 6-35), as each sector for storing the compressed data and uncompressed data are of fixed size, such as 256 byte.

15. As per claim 10, Tremaine, Goldberg and Castelli teach all the limitations of claim 8 as discussed above, where Tremaine further teach the compression system and method comprising wherein the first and second components would obviously be compressed into variable length tags (Tremaine, col. 8, ll. 29-58), as different degree of compressibility are utilized.

16. As per claim 11, Tremaine, Goldberg and Castelli teach all the limitations of claim 8 as discussed above, where Tremaine and Castelli further teach the compression system and method comprising wherein the first component is received at the compression logic and encoded to form a tag (Tremaine col. 5, ll. 1-11; col. 5, ll. 35-49 and col. 6, ll. 6-41 and Castelli Fig. 7), as the first component would obviously be compressed to form the compressed data.

17. As per claim 12, Tremaine, Goldberg and Castelli teach all the limitations of claim 11 as discussed above, where Castelli further teaches the compression system and method comprising a buffer to store the tag and second component of each symbol as the compressed symbol (Castelli, Fig. 7), as the compressed symbol is buffered in the memory.

18. As per claims 24 and 27, Tremaine, Goldberg and Castelli teach all the limitations of claims 23 and 26 as discussed above, where Tremaine further teach the compression system and method comprising wherein the chipset (cache controller)

Art Unit: 2181

further comprises decompression logic (Tremaine, Fig. 1, ref. 105) to decompress compressed symbols within a compressed data block to generate uncompressed symbols.

19. Claims 13-14 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tremaine (US Patent 6,775,751), Goldberg (US Patent 7,035,656) and Castelli et al. (US Patent 6,847,315) as applied to claims 8 and 24 above, and further in view of Franaszek et al. (US Patent 5,729,228).

20. As per claim 13, Tremaine, Goldberg and Castelli teach all the limitations of claim 8 as discussed above, where Tremaine further teaches the compression system and method comprising wherein the compression logic comprises constant matching logic to determine if the first component has all ones or all zeros (e.g. “all zero” special case) (Tremaine, col. 8, ll. 29-58).

Tremaine, Goldberg and Castelli do not expressly teach the compression system and method comprising dictionary matching logic to determine if the first component matches a dictionary element; and constant match logic to determine if the second component has all ones or all zeroes.

Franaszek teaches a compression system and method comprising a compressor (Fig. 2, ref. 241-244) compressing a corresponding uncompressed sub-block (Fig. 2, ref. 221-224) by matching the corresponding uncompressed sub-block to the dictionary (Fig. 2 and col. 2, l. 48 to col. 3, l. 15).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Fransaszek's parallel decompressors into Tremaine, Goldberg and Castelli's compression system and method. The resulting combination of the references further teaches the compression system and method comprising the compressor (e.g. dictionary matching logic) to compress the uncompressed data (e.g. first component) by matching the first component with the dictionary element; and constant match logic would obviously also determine if the second component has all ones or all zeroes.

Therefore, it would have been obvious to combine Fransaszek with Tremaine, Goldberg and Castelli for the benefit of providing even faster data compression and decompression (Fransaszek, col. 1, ll. 36-37).

21. As per claim 14, Tremaine, Goldberg, Castelli and Fransaszek teach all the limitations of claim 13 as discussed above, where Tremaine and Fransaszek further teach the compression system and method comprising wherein the compression logic comprises an encoder coupled to the match logic and the no match logic to encode the first component to form a tag if the first component matches a dictionary element, has all ones or zeroes (Tremaine col. 8, ll. 29-58 and Fransaszek Fig. 2, ref. 241-244).

22. As per claim 25, Tremaine, Goldberg and Castelli teach all the limitations of claim 24 as discussed above 25.

Tremaine, Goldberg and Castelli do not teach the computer system comprising wherein the decompression logic decompresses the compressed symbols in parallel.

Fransaszek teaches a decompression system and method comprising decompressing compressed data in parallel (Fig. 3; col. 1, ll. 36-41 and col. 3, ll. 16-37).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Fransaszek's parallel decompression into Tremaine, Goldberg and Castelli's computer system. The resulting combination of the references further teaches computer system further comprising wherein decompression logic decompresses the compressed data (e.g. compressed symbols) in parallel.

Therefore, it would have been obvious to combine Fransaszek with Tremaine, Goldberg and Castelli for the benefit of providing even faster data compression and decompression (Fransaszek, col. 1, ll. 36-37).

23. Claims 15-17, 19 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fransaszek et al. (US Patent 5,729,228) in view of Goldberg (US Patent 7,035,656).

24. As per claims 15, 19 and 28, Fransaszek teaches a decompression system and method comprising:

a plurality of decompression units (Fig. 3, ref. 341-344) to decompress a corresponding compressed symbol (Fig. 3, ref. 261-264) within a fixed offset

Art Unit: 2181

compressed data block to generate an uncompressed symbol (Fig. 3, ref. 220) (col. 1, ll. 039-41 and col. 3, ll. 16-37);

receiving the fixed offset compressed data block having the plurality of compressed symbols (Fig. 3 and col. 3, ll. 16-37);

the decompression units decompressing each of the compressed symbols in parallel by randomly accessing a first compressed symbol within the fixed offset compressed data block is received (Fig. 3; col. 1, ll. 13-17 and col. 3, ll. 16-37), wherein the randomly access is enabled by the parallelism; and

wherein the parallel decompression of the fixed offset compressed data block is dictionary based (col. 3, ll. 14-37).

Fransaszek does not teaches the decompression system and method comprising wherein the fixed offset compressed data block have a plurality of dictionary elements.

Goldberg teaches a data decompression system and method comprising receiving a compressed data having a dictionary element along with the compressed data (col. 1, ll. 17-40).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Goldberg's dictionary element into Fransaszek's decompression system and method. The resulting combination of the references further teaches the decompression system and method comprising wherein the received compressed data (e.g. fixed offset compressed data block) having the plurality of dictionary elements.

Therefore, it would have been obvious to combine Goldberg with Franaszek for the benefit of optimizing the amount of data transferred by reducing the actual amount of data transferred and enabling more resources for error detection and data correction (Goldberg, col. 1, ll. 23-26).

25. As per claim 16, Franaszek and Goldberg teach all the limitations of claim 15 as discussed above, where Franaszek further teaches the decompression system and method comprising wherein each of the compressed symbols are decompressed simultaneously (Franaszek, col. 1, ll. 36-45 and col. 3, ll. 16-37), wherein the decompression of the compressed symbols would be implemented in parallel, therefore providing the simultaneous decompression of the compressed symbols.

26. As per claims 17 and 29, Franaszek and Goldberg teach all the limitations of claims 15 and 28 as discussed above, where Franaszek further teaches the decompression system and method comprising wherein decompressing each of the compressed symbols comprises:

analyzing a tag component (Franaszek, compressed sub-block 261-264 of Fig 3) within a compressed symbol (Franaszek, compressed block 260 of Fig. 3) (Franaszek, Fig. 3), as each decompressor analyzed the received compressed sub-block for the corresponding matches to the dictionary; and

decompressing the compressed symbol (Franaszek, compressed block 260 of Fig. 3) to form a symbol (Franaszek, uncompressed data block 220 of Fig. 3) based upon the tag value (Franaszek, compressed sub-block 261-264 of Fig 3).

27. Claims 18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franaszek et al. (US Patent 5,729,228) in view of Goldberg (US Patent 7,035,656) as applied to claims 17 and 19 above, and further in view of Castelli et al. (US Patent 6,847,315).

28. As per claim 18, Franaszek and Goldberg teach all the limitations of claim 17 as discussed above, where Franaszek further teaches the decompression system and method comprising wherein decompressing the compressed symbol to form a symbol based upon the tag value (Franaszek, compressed block 260 of Fig. 3) comprises decoding (e.g. decoding by the corresponding decompressor) the tag (Franaszek, compressed block 260 of Fig. 3) to form a matched component of the symbol (Franaszek, uncompressed data block 220 of Fig. 3) (Franaszek, Fig. 3), as the decompressor determine the corresponding match of the compressed sub-block to the dictionary .

Franaszek and Goldberg do not teach the decompression system and method comprising combining the matched component with an unmatched component within the compressed symbol to form the symbol.

Castelli teaches a data compression and decompression system and method comprising a data compressor separating a uncompressed data into a first portion and a second portion, wherein one of the portion is left uncompressed and the other portion is compressed forming a compressed data entry (Fig. 7; col. 1, ll. 60-65 and col. 2, ll. 10-18), therefore it would be necessary, during the decompression of data, to combined the uncompressed potion with the decompressed compressed portion to form the original uncompressed data.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Castelli's compressed and compressed data into Franaszek and Goldberg's the decompression system and method. The resulting combination of the references further teaches the decompression system and method comprising combining the uncompressed data (e.g. unmatched component) within the compressed symbol with the decompressed compressed data (e.g. matched component) to form the original uncompressed data (e.g. symbol).

Therefore, it would have been obvious to combine Castelli with Franaszek and Goldberg for the benefit of reducing latency associated with the transferring of compressed data as data is compressed at the transmitter, transmitted in compressed form and decompressed at the receiver (Castelli, col. 1, ll. 57-59).

29. As per claim 20, Franaszek and Goldberg teach all the limitations of claim 19 as discussed above.

Fransaszek and Goldberg do not teach the decompression system and method comprising wherein the compressed symbol comprises a tag component and an unmatched symbol component.

Castelli teaches a data compression and decompression system and method comprising a data compressor separating a uncompressed data into a first portion and a second portion, wherein one of the portion is left uncompressed and the other portion is compressed forming a compressed data entry (Fig. 7; col. 1, ll. 60-65 and col. 2, ll. 10-18).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Castelli's compressed and uncompressed data into Fransaszek and Goldberg's decompression system and method. The resulting combination of the references further teaches decompression system and method comprising wherein the compressed symbol comprises the compressed data (e.g. tag component) and the uncompressed data (e.g. unmatched symbol component).

Therefore, it would have been obvious to combine Castelli with Fransaszek and Goldberg for the benefit of reducing latency associated with the transferring of compressed data as data is compressed at the transmitter, transmitted in compressed form and decompressed at the receiver (Castelli, col. 1, ll. 57-59).

30. As per claim 21, Fransaszek, Goldberg and Castelli teach all the limitations of claim 20 as discussed above, where Fransaszek further teaches the decompression system and method comprising wherein each decompression unit comprises logic to

Art Unit: 2181

decode the tag component (e.g. compressed data) of a compressed symbol to generate a matched symbol component (Franaszek, Fig. 3), as the compressed data is properly decompressed.

31. As per claim 22, Franaszek, Goldberg and Castelli teach all the limitations of claim 21 as discussed above, where Franaszek and Castelli further teaches the decompression system and method comprising wherein each decompression unit combines a matched symbol component with the unmatched symbol component to form an uncompressed symbol (Franaszek, Fig. 3 and Castelli, Fig. 7), as the compressed data is properly decompressed and combined with the uncompressed data in order to form the original uncompressed data.

**VI. CLOSING COMMENTS**

**Conclusion**

**a. STATUS OF CLAIMS IN THE APPLICATION**

The following is a summary of the treatment and status of all claims in the application as recommended by M.P.E.P. 707.07(i):

**a(1) CLAIMS REJECTED IN THE APPLICATION**

Per the instant office action, claims 1-29 have received a first action on the merits and are subject of a first action non-final.

**b. DIRECTION OF FUTURE CORRESPONDENCES**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

**IMPORTANT NOTE**

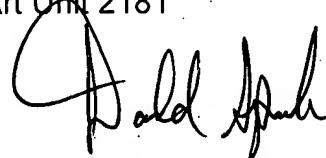
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2181

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 21, 2007

Chun-Kuan (Mike) Lee  
Examiner  
Art Unit 2181



DONALD SPARKS  
SUPERVISORY PATENT EXAMINER